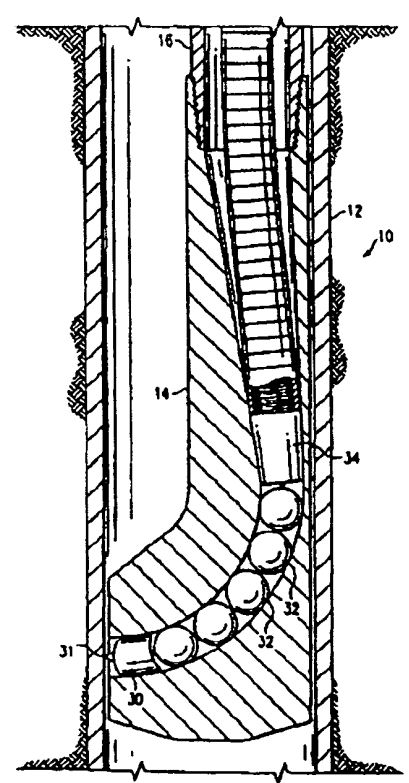


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| <p>(54) Title: HORIZONTAL DRILLING METHOD AND APPARATUS</p> <p>(57) Abstract</p> <p>The objects of the invention are provided using a method for horizontal drilling in which a shoe (14) having an elbow-shaped cavity (20) therein is lowered to a selected point. An explosive charge (30) is placed at the far end of the shoe (14) adjacent to the well casing (12). Impact transferring means (32) are positioned between the explosive charge (30) and the vertical portion of the well above the shoe (14). An impact is struck on the surface of the transfer means (32) to cause an impact-type detonator (31) to discharge, causing the explosive charge (30) to discharge. This perforates the casing (12) of the well at the tip of the shoe (14). The shoe (14) and the tubing (16) above it are then cleared and a hydraulic drilling device (64) is inserted into the shoe (14). The shoe (14) guides the hydraulic drilling device (64) into place and high pressure liquid is pumped through the hydraulic device (64) which extends through the perforation in the well casing into the earth's strata.</p>  | | |

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